

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): In an iterative decoder, an iterative decoding method for decoding received digital data elements representing source data elements coded according to a turbo coding scheme, the iterative decoding method comprising:

computing a set of branch metrics for the received digital data elements based upon at least one received digital data element;

computing a set of forward recursive metrics based upon the set of branch metrics according to an approximation:

$$A_k(m) = \log[\alpha_k(m)] = \max_{m'} \{ \Gamma(u_k, c_k, m', m) + A_{k-1}(m') \} - H_{A_k};$$

computing a set of backward recursive metrics based upon the set of branch metrics according to an approximation:

$$B_k(m') = \log[\beta_k(m')] = \max_m \{ \Gamma(u_k, c_k, m', m) + B_{k+1}(m) \} - H_{B_k}; \text{ and}$$

computing a set of output extrinsic Log Likelihood Ratio (LLR) values based upon the set of backward metrics and the set of forward metrics according to an equation:

$$\Lambda(d_k) = \log \left[\sum_{e: u(e)=d_k=+1} e^{\{A_{k-1}(m') + \Gamma_1(c_k, m', m) + B_k(m)\}} \right] - \log \left[\sum_{e: u(e)=d_k=0} e^{\{A_{k-1}(m') + \Gamma_0(c_k, m', m) + B_k(m)\}} \right].$$

Claims 2-5 (canceled).

Claim 6 (original): The iterative decoding method of claim 1, wherein computing the set of backward recursive metrics comprises:

using a sliding window for processing less than the entirety of received digital data elements.

Claim 7 (original): The iterative decoding method of claim 6, wherein using a sliding window for processing less than the entirety of received digital data elements comprises:
initializing the set of backward recursive metrics with equal probabilities.

Claim 8 (original): The iterative decoding method of claim 6, wherein using a sliding window for processing less than the entirety of received digital data elements comprises:
initializing the set of backward recursive metrics with the set of forward recursive metrics.

Claims 9-33 (canceled).